



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/036,762	12/21/2001	Abbas Rashid	NEXSI-01223US0	6231
28863	7590	05/17/2006	EXAMINER HARPER, KEVIN C	
SHUMAKER & SIEFFERT, P. A. 8425 SEASONS PARKWAY SUITE 105 ST. PAUL, MN 55125			ART UNIT 2616	
PAPER NUMBER				

DATE MAILED: 05/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/036,762

Applicant(s)

RASHID ET AL.

Examiner

Kevin C. Harper

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 39,41-50,52-57 and 59-62 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 39,41-45,50,52,53,57 and 59-62 is/are allowed.
- 6) ☒ Claim(s) 46-49 and 54-56 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 01/06, 02/06
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

Response to Arguments

Applicant's arguments, filed February 13, 2006 have been fully considered and are persuasive. However, upon further consideration, a new ground(s) of rejection is made in view of Lea in view of Ikeda, Lindeborg and Hunt.

Specification

1. The disclosure is objected to because the application docket numbers on page 1 should be replaced with application serial numbers. The status of the applications should be updated, if necessary. Appropriate correction is required.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 46-49 and 54-56 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 39, 41, 48-49, 55 and 60 of copending Application No. 10/036,603 in view of Lea (US 6,115,373) in view of Ikeda (5,787,073).

Claims 46-49 and 54-56 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims of copending Application No. 10/036,602 in view of Lea (US 6,115,373) in view of Ikeda (5,787,073).

Claims 46-49 and 54-56 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims of copending Application No. 10/037,144 in view of Lea (US 6,115,373) in view of Ikeda (5,787,073).

This is a provisional obviousness-type double patenting rejection.

2. Regarding claims 46-47 and 54-55, claims 39, 41 and 55 of the '603 application (or claims 39-40, 42, 55-56 and 58 of the '602 application; or claims 39, 43-44, 47 and 52-55 of the '144 application), recite a cross-bar switch having input ports, sink ports and data rings, where the sink port snoops packets on the data rings. However, the claim(s) additionally recite(s) an address table (or issuing a transmission request; or receiving packets from two or more data rings). In removing features, the scope of the claims is merely broadened by eliminating elements and their functions. It has been held that omission of an element and its function is an obvious expedient if the remaining elements perform the same function as before. In re Karlson, 136 USPQ 184 (CCPA). Also note Ex parte Rainu, 168 USPQ 365 (Bd. App. 1969) (omission of a reference element whose function is not needed would be obvious to one skilled in the art). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to not recite an address table in the '603 application (or the '602 application; or the '144 application).

3. Further, claims 39, 41 and 55 of the '603 application (or claims 39-40, 42, 55-56 and 58 of the '602 application; or claims 39, 43-44, 47 and 52-55 of the '144 application) do not recite a retry input for a sink port. Lea discloses a cross bar switch (fig. 10) comprising a set of input ports (fig. 1, item 2), a set of sink ports (item 3) that includes a communication link interface (fig. 3) including a retry input (col. 6, lines 22-24) where a sink port responds to the signal on the retry input (col. 6, lines 24-27). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to recite a retry input for a port in the '603 application (or the '602 application; or the '144 application) in order to control the transfer of data (Lea, col. 6, lines 19-22).

4. Further, Lea does not disclose that the sink port aborts transmission of a data packet and transmits the data packet after waiting an amount of time. Ikeda discloses aborting data packet transmission and transmitting the data packet after waiting an amount of time (col. 4, lines 1-3). The transmission is paused until the signal is altered (col. 5, lines 65-67; note: an ER value explicitly indicates a data rate for backpressure). The switch includes a register for maintaining congestion state values (col. 3, lines 40-52) that is used for pausing a predetermined amount of time (col. 3, lines 60-62). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to recite a sink port for pausing the transmission of packets in the '603 application (or the '602 application; or the '144 application) in view of Lea in order to stop transmission to a congested downstream switch (Ikeda, col. 3, lines 53-60).

5. Regarding claims 48-49 and 56, the additional limitations of this claim not addressed above are recited in claims 48-49 and 60 of the '603 application (or claims 48-49, 51, 53, 54, 62-64 of the '602 application; or claims 49-50 and 56 of the '144 application).

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 54-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lea (US 6,115,373) in view of Ikeda (5,787,073) and Lindeborg et al. (US 5,646,939).

6. Regarding claims 54-55, Lea discloses a cross bar switch (fig. 10) comprising a set of input ports (fig. 1, item 2), a set of sink ports (item 3) that includes a communication link interface (fig. 3) including a retry input (col. 6, lines 22-24) where a sink port responds to the signal on the retry input (col. 6, lines 24-27) However, Lea does not disclose that the sink port aborts transmission of a data packet and transmits the data packet after waiting an amount of time. Ikeda discloses aborting data packet transmission and transmitting the data packet after waiting an amount of time (col. 4, lines 1-3). The transmission is paused until the signal is altered (col. 5, lines 65-67; note: an ER value explicitly indicates a data rate for backpressure). The switch includes a register for maintaining congestion state values (col. 3, lines 40-52) that is used for pausing a predetermined amount of time (col. 3, lines 60-62). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have a sink port for pausing the transmission of packets in the invention of Lea in order to stop transmission to a congested downstream switch (Ikeda, col. 3, lines 53-60).

7. Further, Lea in view of Ikeda does not disclose snooping data packets in a set of data rings. Lindeborg discloses determining a destination address (snooping) at a port (fig. 3, item 14; fig. 4; col. 1, lines 33-35). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to snoop packets to determine if they are destined for the port in the invention

of Lea in view of Ikeda in order to properly receive packets in a ring network (Lindeborg, col. 1, lines 13-16).

Claim 56 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lea in view of Ikeda and Lindeborg as applied to claim 54 above, and further in view of Hunt et al. (US 6,249,819).

8. Lea in view of Ikeda and Lindeborg does not disclose determining if sufficient storage space is available for storing a packet or that a total number of packets does not exceed a predetermined number of packets. Hunt discloses determining sufficient storage space in an input buffer (fig. 2; col. 1, lines 39-46). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to monitor the buffer fullness of an input packet in the invention of Lea in view of Ikeda and Lindeborg in order to prevent an overflow condition at an input port (Hunt, col. 1, lines 33-36).

Allowable Subject Matter

Claims 39, 41-45, 50, 52-53, 57 and 59-62 are allowed.

Claims 46-49 and 54-56 would be allowable if the above double patenting rejection is overcome.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Harper whose telephone number is 571-272-3166. The examiner can normally be reached weekdays from 11:00 AM to 7:00 PM ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To, can be reached at 571-272-7629. The centralized fax number for the Patent Office is 571-

Art Unit: 2616

273-8300. For non-official communications, the examiner's personal fax number is 571-273-3166 and the examiner's e-mail address is kevin.harper@uspto.gov. Previous art units 2661-2668 have merged to form a new art unit 2616. A similar restructuring has taken place for all other art units in TC 2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications associated with a customer number is available through Private PAIR only. For more information about the PAIR system, see portal.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Kevin C. Harper', with a stylized, cursive script.

Kevin C. Harper

May 15, 2006